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AN

ADDRESS

TO THE

PUBLIC,

ON THE

ORIGIN OF THE ART OF PRINTING,

WITH A DESCRIPTION OF THE

LOGOGRAPHIC INVENTION;

BEING

An Introduction to the Publication of the WORKS of ſome of the moſt eminent Authors,

EXECUTED BY THE

NEW METHOD of PRINTING

WITH WORDS INSTEAD OF SINGLE LETTERS,

BY J. WALTER.

BRITISH MUSEUM
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ADDRESS TO THE PUBLIC.

I HAVE choſen the following ſubject for the firſt volume of the works intended to be publiſhed, as it is applicable to my preſent purpoſe, and the author in high eſtimation among the learned.—As literature tends to inſtruction, the means to promote and extend it muſt ſurely be an object with every man, whoſe thoughts extend beyond ſelf-love, and can expand his ideas to the benefit of a riſing generation; beſides the rational entertainment it ever affords enlightened minds, when opportunity permits men to retire from the buſy ſcene of their various purſuits in life.

"WHICH of the arts is moſt uſeful "to ſociety," is a queſtion not eaſily

to be determined: it has exerciſed the abilities of many ingenious writers, who have publiſhed voluminous tracts on the ſubject, but the public voice not having as yet given judgment on ſo nice and delicate a point, the matter is ſtill *ſub judice*. It has been admitted, by all parties, however different their opinions might be in other reſpects, that *printing* is entitled to a diſtinguiſhed rank among the arts. If the knowledge of them has been diſſeminated, through the world; if barbarous nations have been poliſhed and civilized; if the ſublime and ſalutary doctrines of Chriſtianity have been propagated, defended and maintained; if the principles of commerce, politics and philoſophy have been laid open and made known to the generality of mankind; if the learning of the antients has been reſtored; if the dominion of pedantry and barbariſm has been overturned; if the rights and privileges of ſubjects are well known and aſcertained; in a word, if a communication has been opened and eſtabliſhed between the learned of all countries, the thanks of grateful nations are due for all theſe bleſſings and advantages, to the inventor of the art of printing. This curious art has juſtly been

been called the guardian or preſerver of all the other arts. *Writing*, indeed, was the firſt depoſitory of the brilliant and uſeful conceptions of the human mind; but as the copying of works in manuſcript was attended with a very heavy expence, the number of copies was comparatively ſmall, and even among thoſe who were eaſy in their circumſtances, few were ſufficiently opulent to purchaſe works, which beſide their intrinſic merit, derived like diamonds, additional value from the ſcarcity —Before the art of printing was diſcovered, a manuſcript of merit was looked upon as a treaſure, which the learned deemed far more eſtimable than lands or houſes; they then thought themſelves more or leſs diſtinguiſhed from the reſt of mankind, as they excelled in the bulk or excellence of their libraries: of this a greater inſtance cannot be produced, than what Dr. Conyers Middleton ſays in the life of Cicero, page 136, and 137, " Nor was he (ſpeaking of Cicero) leſs eager in making a collection of Greek books, and forming a library by the ſame opportunity of Atticus's help. This was Atticus's own paſſion, who hav-

ing free acceſs to all the Athenian libraries, was employing his ſlaves in copying the works of their beſt writers, not only for his own uſe, but for ſale alſo, and the common profits, both of the ſlave and the maſter; for Atticus was remarkable above all men of his rank, for a family of learned ſlaves, having ſcarce a foot boy in his houſe, who was not trained both to read and write for him. By this advantage he had made a very large collection of choice and curious books, and ſignified to Cicero his deſign of ſelling them; yet ſeems to have intimated withal, that he expected a larger ſum for them than Cicero could eaſily ſpare; which gave occaſion to Cicero, to beg of him in ſeveral letters, to reſerve the whole number for him, till he could raiſe money enough for the purchaſe.—"Pray keep your books," ſays he, "for "me, and do not deſpair of my being "able to make them mine; which, if I "can compaſs, I ſhall think myſelf rich-"er than Croeſus, and deſpiſe the fine "villas and gardens of them all."—Again, "Take care that you do not part with "your library to any man, how eager ſo-

"ever

" ever he may be to buy it; for I am ſet-
" ting apart all my little rents to purchaſe
" that relief for my old age."—In a third letter he ſays, " That he had placed all his
" hopes of comfort and pleaſure, whenever
" he ſhould retire from buſineſs, on Atticus's
" reſerving theſe books for him."—Again, in page 453, " Atticus lent him two of
" his librarians to aſſiſt his own in taking
" catalogues, and placing the books in
" order; which he calls the infuſion of
" the ſoul into the body of his houſe."

THE famous Antonius Bononia Becatellus, ſurnamed Panorme, did not fall ſhort of Cicero in the value he ſet upon manuſcript books, as appears from the following letter which he wrote to Alphonſus, king of the Two Sicilies—*Significaſti mihi nuper ex Florentiâ*, &c. " You lately wrote to
" me from Florence, that the works of
" Titus Livius are there to be ſold in
" very handſome books; and that the price
" of each book is one hundred and twenty
" crowns of gold: therefore I entreat your
" Majeſty, that you cauſe to be bought
" for us, Livy, whom we uſed to call the

" king of books, and to be ſent hither to
" us. I ſhall in the mean time procure
" the money, which I am to give for the
" price of the book. One thing I want
" to know of your prudence, whether
" Poggius or I have done beſt; *he*, that
" he might buy a country-houſe near
" Florence, ſold Livy, which he had writ
" in a very fair hand; and *I* to purchaſe
" Livy, have expoſed a piece of land to
" ſale."

It was not in Italy only that books were ſold at this enormous price, but in France alſo, as appears by what Gaguin wrote to one of his friends, who had ſent him from Rome to procure a Concordance for him: " I have not to this day found out a Con-
" cordance, except one, that is greatly eſ-
" teemed, which Paſchaſius, the bookſel-
" ler, has told me is to be ſold, but the
" owner of it is abroad; and it may be
" had for a hundred crowns of gold."

An Engliſh gentleman (Mr. Ames) had a folio manuſcript in French verſe called, *Roman de la Roſe*, (from whence Chaucer's tranſlation)

tranſlation) on the leaf of which is wrote, in old French, *ceſt lyvir Couſta au palais de Parys quarante Couronnes d'or ſans mentyr*; that is—this book coſt at the palace of Paris, forty crowns of gold, without lying.

GALEN ſays, in his commentary upon the third of the Epidemics, and upon the firſt book of the Nature of Man, that Ptolomy Philadelphus gave to the Athenians fifteen talents, with exemption from all tribute, and a great convoy of proviſions, for the autographs and originals of the tragedies of Eſchylus, Sophocles, and Euripedes.

BRASICANUS ſays, "The Emperor Frederick III. knew no better gratuity for "John Capnion, who had been ſent to him "on an embaſſy by Edward of Wirtemberg, "than a preſent of an old manuſcript of the "Bible in Hebrew."—In thoſe days manuſcripts were ſo very ſcarce that they were not ſold but by *contracts*, and upon as good conditions and ſecurities, as thoſe of an eſtate. Among many inſtances of this kind

kind, there is one in the library of the college of Laon in Paris, made in the preſence of two notaries, in the year 1332. Another inſtance of the high eſtimation in which books were held in old times, is to be ſeen in the front of the manuſcript Goſpels belonging to the public library of the Univerſity of Cambridge, written in an old hand, in Latin and Anglo-Saxonic, given to the Univerſity by the learned Theodore Beza, "This book was preſented by Leo-"fric, Biſhop of the Church of St. Peter's, "in Exeter, for the uſe of his ſucceſſors." This Leofric was Chancellor of England, in the reign of King Edward the Confeſſor, and died in 1071, or 1072; and by his leaving it as a bequeſt to his ſucceſſors, it appears that he ſet a very high value upon it.

THESE anecdotes ſuffice to ſhew how difficult it was in former times for even the wealthy to procure the means of acquiring knowledge: the copies of learned works were few; and conſequently, the peruſal and poſſeſſion of them was confined to a very ſmall number of perſons.

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But printing has multiplied the copies to ſuch a degree, and conſequently reduced the price of them ſo low, that even the poor can purchaſe the moſt learned works both of the ancients and moderns; and thus the knowledge of the arts and ſciences, formerly confined to very few individuals, is now placed within the reach of thouſands. Thoſe who thirſt after inſtruction and information, need not now wait the ſlow reſult of the tranſcribers labour; but may, at an eaſy expence, ſtore themſelves with all the knowledge of paſt ages, that has ſurvived the wreck of time. This extenſion of learning by the means of printing, has been productive of the happieſt effects by enlightening the great maſs of the people in all the countries of Europe; and if any one will take the trouble to compare the preſent generation in regard to literature and their capacity in affairs, with their anceſtors who flouriſhed four hundred years ago, before the art of printing was known, he will readily acknowledge that this curious art has been productive of the greateſt benefit and improvement to mankind.

IT is matter of ſurpriſe that the Greeks and Romans, under whoſe hands the braſs and marble aſſumed the forms that the carver and ſtatuary wiſhed to give them, and ſeemed even to breathe; that theſe enlightened nations, who poſſeſſed in an eminent degree the art of engraving figures on ſeals, and tranſmitting to poſterity the moſt memorable hiſtorical events by medals, ſtruck from a die, and multiplied to any degree, ſhould never have thought of plates and types for printing: the honour of ſuch an invention was, by a ſtrange fatality, reſerved for an æra of darkneſs; and what lay concealed from the ingenious and enlightened men of the Auguſtan age, was happily diſcovered in the 15th century at Mentz in Germany, a country whoſe inhabitants the Romans, in the meridian of their glory, affected to call a dull and ſtupid people. Haerlem in Holland diſputes with Mentz the honour of having invented the art of printing; but the generally received opinion is, that it is juſtly due to the latter, where John Guttemberg and John Fuſt, or Fauſt, firſt attempted to print, ſome time between the years 1440 and 1450. The firſt printed book

book upon record is the book of Pſalms, by Fauſt and Schoeffer, his ſon-in-law, which was publiſhed on the 14th of Auguſt, 1457. Several works were printed many years before; but as the inventors wiſhed to keep their ſecret to themſelves, they ſold their firſt printed works as manuſcripts. This gave riſe to an adventure that brought great calamity on Fauſt; he began in 1450 an edition of the Bible, which was finiſhed in 1460; he carried ſeveral printed copies of it to Paris, and offering them to ſale as manuſcripts, he had the misfortune to be thrown into priſon, on ſuſpicion that he dealt with the devil; for the French could not otherwiſe conceive how ſo many books ſhould ſo exactly agree in every letter and point, unleſs the devil, who, in thoſe days of darkneſs was thought to be always ready at every perſon's elbow to appear when called for, *in propria perſonæ*, and offer his ſervices, had lent him aſſiſtance. Fauſt, in order to prove that he was not connected with the infernal powers, and to obtain his liberty, was obliged to diſcloſe his ſecret, and inform the miniſters how the work had been done. It is upon this adventure that are founded the

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many ludicrous dialogues which Fauſt, under the name of Dr. Fauſtus, holds with the devil in our travelling puppet ſhews. Printing, like all other arts in their infancy, remained for ſome time in a rude ſtate: the firſt eſſay in printing was from wooden blocks, on the broad ſurface of which the letters were cut, like raiſed inſcriptions, on ſome old tombſtones; but the inconveniencies attending this mode ſoon pointed out the neceſſity of deviſing ſome improvement; for if a letter or two happened to be defaced, the whole block became uſeleſs, and all the expence of cutting it was loſt; and though no letter ſhould be defaced, ſtill the blocks could be uſed only for the ſingle work then in the preſs; and when the copies that were wanted were printed off, the blocks were thrown away, as being of no manner of uſe for the impreſſion of any other work. The fertile genius of Fauſt happily diſcovered a new method of printing, at infinitely leſs expence, and not ſubject to the inconvenience that aroſe from the breaking of letters cut in blocks: his was the honour of having invented ſingle types made of metal, which being

being diſtributed into their proper boxes after the edition of a book, might be uſed over and over again in the printing of other works: this improvement was rendered effectual by Peter Schœffer, the ſon-in-law of Fauſt, who deviſed the puncheons, matrices and moulds for caſting the types. This method of printing with ſingle letters being made public, was ſoon adopted, and generally uſed, with little variation or improvement, down to the preſent century; one improvement indeed was made, which may be deemed of the greater conſequence, as it firſt ſuggeſted the idea of the plan on which this book is printed; it was found that when the letter *f* occurred twice in the ſame word, without any intermediate letter, the top of one *f* was ſo inconveniently placed, that it was generally broke off in the printing: the inconvenience was always increaſed when theſe two letters were followed by an *i*, as in the word traffick, the dot over the *i* uſually ſhared the ſame fate as the top of the *f*; hence was diſcovered the propriety of caſting double and treble letters, as *ſſ*, *ff*, *ffi*, *ffi*, &c. Why this improvement was not carried further cannot

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be eaſily aſcertained, unleſs it is preſumed that the expence of the undertaking, and the difficulties that might be expected in arranging an entire new ſyſtem, deterred men from the attempt. Here was however a principle upon which an enterpriſing man might proceed; and accordingly an experiment was made about ſix years ago in printing with cemented *figures*, before an attempt ſhould be made to uſe letters cemented into words. The perſon to whoſe induſtry and fertility of invention Mr. Walter is indebted for the great outline of the plan which he has happily brought to perfection for printing with entire words inſtead of ſingle letters, reſolved to reduce his theory to practice, in a daily liſt of blanks and prizes in the lottery, numerically arranged, ſuch as had never been attempted before. He knew that if the uſual method of printing was purſued, he could not poſſibly publiſh his liſt on the evening of each day's drawing, and that if it was longer delayed, his purpoſe would be defeated; he therefore cauſed types of two, three, four, or five figures, according to what were neceſſary to form each number, to be made into

into one body, inſtead of having them ſeperate, according to the ordinary mode both in letter and figure printing: the compoſitor was thus enabled to take up an entire number ready compoſed, with exactly the ſame diſpatch that he could any ſingle figure; conſequently the work was performed in nearly one-ſixth part of the uſual time, with this additional advantage, that there was no poſſibility of miſplacing or inverting a figure, or of ſubſtituting one for another.

THIS experiment anſwered all the expectation of the projector, who was therefore encouraged to purſue it in another line: wanting to form ſome large mercantile tables, conſiſting of pounds, ſhillings, pence and farthings, he procured types for any ſum of money, ready compoſed and united, by which every ſpecies of figure printing could be performed with ſurpriſing expedition, and the greateſt accuracy and correctneſs. Here too ſucceſs attended the undertaking, and encouraged the inventor to proceed in his grand object, of printing all ſorts of works with entire words. The

practicability of the plan now appeared to demonſtration; for as every language is compoſed of a limited quantity of words, conſequently a type might be formed for each word, and a number of types of the ſame word, according to the frequency of its occurrence in the courſe of a work, which might be computed on eſtimates very little liable to error. This was accordingly done on a ſmall ſcale, and every hope of ſucceſs that the theory of the plan had inſpired, was fully confirmed by practice. The inventor then petitioned his Majeſty for a patent, to ſecure to him the excluſive privilege of printing with words entire, and the invention appearing to deſerve encouragement, his Majeſty was pleaſed to grant the prayer of the petition, and a royal patent was accordingly obtained.

In this ſtate it lay for a conſiderable time, without a foſter-father, on account of the difficulties which appeared to be encountered. When it was introduced to my view, I found the invention in a rude ſtate; it was like a new born child, that with care and attention might be brought to maturity, and

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one day become an ornament to ſociety. I reſolved to ſpare neither time nor labour to reduce it to a regular ſyſtem. Had I not been fixed in this purpoſe, the difficulties that I met in the way would ſoon have made me deſiſt: however, as I had embarked in the buſineſs, I determined to ſurmount every obſtacle, and not ſuffer ſo promiſing an improvement to be loſt to the world. The undertaking was arduous, and much ſpirit was wanted to complete it. To arrange and methodize all the parts of this invention, which, if not in itſelf a mathematical ſcience, was ſomething ſo ſcientific as to come very near it, required uncommon patience and induſtry.

THE words of the language were to be regularly claſſed, under ſuch heads, that the compoſitor ſhould be able to find out the type of each word with as much facility, as that of a ſingle letter. Not confiding in my own abilities, and fearing to be the dupe of my own fondneſs for an invention, which ſelf-love might perhaps lead me too ſanguinely to hope I had brought to perfection, I communed

with the Preſident of the Royal Society, Sir Joſeph Banks, to whom I acknowledge myſelf indebted for many uſeful obſervations. The opinion that he was pleaſed to give me of this new ſyſtem, is too flattering to be ſuppreſſed here; it was conveyed in theſe terms,—"it will be a "moſt uſeful acquiſition to the literary "world, and deſerves the higheſt encou-"ragement and ſupport from the public: "it has been a moſt ſingular and arduous "undertaking to have a whole language to "encounter and modify into ſo many vari-"ations and points of view, that it is abſo-"lutely a ſcience, and perfectly original." —I correſponded alſo on the ſame ſubject with Dr. Franklin at Paris, who in the early part of his life was diſtinguiſhed for his abilities in the art of printing; and by the Doctor's encouragement, and that of Sir Joſeph Banks, was pleaſed to find that my opinion of the practicability of the plan was not ſingular. I next ventured to appeal to the public in a pamphlet printed according to the new method, that the principles of it being thus made known,

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thoſe who were acquainted with the nature of printing in general, might be induced to ſtate their objections, before I had proceeded too far in ſo extenſive an undertaking.

This pamphlet was by *permiſſion*, dedicated to his Majeſty, who was graciouſly pleaſed to receive a copy of it from the hands of the Duke of Portland.

WERE I to ſtate the different experiments that have been tried, on the theory of this plan I ſhould find myſelf led into a tedious detail, very unintereſting to my readers. I will not therefore tire the patience of thoſe, by whoſe generous ſupport I am encouraged to bring out theſe publications; their example I hope will be followed by many more, who while they countenance and patroniſe a private individual in his efforts to repair the ruins of a fortune, ſhattered by the calamities of the late war, muſt have the pleaſing ſatisfaction to think that the public at large will ultimately receive great benefit from every encou-

encouragement given to this new method of printing. Notwithſtanding the improvements that daily experience has enabled me to make on the original plan, I am far from thinking that I have carried it to the *ne plus ultra* of perfection; I ſtill ſee that the ſyſtem may, by being rendered more ſimple, become more perfect; and if the public, without whoſe aid ſo great an undertaking cannot be carried on, honour me with their protection, it will be the pleaſure of my life to prove my pretenſions to it well founded; and to demonſtrate that in the progreſs of this plan towards perfection, the advantages that will accrue from it to the nation at large, muſt neceſſarily keep pace with my private intereſt.

To the Noblemen, Ladies and Gentlemen who have already honoured me with their ſubſcriptions for the preſent publications, my moſt grateful acknowledgements are due; they deſerve every eulogium of the public, for the encouragement given by them to a ſyſtem, in the ſucceſs of which the nation is greatly intereſted. Gratitude has

has engraved the obligation ſo deeply on my heart, that time will not be able to efface it: it will ceaſe to beat e'er it be ungrateful; and I truſt I ſhall ſo diſcharge my engagements to theſe generous encouragers of my plan, as to give them entire ſatisfaction.

JOHN WALTER.